

REMARKS

In the Final Office Action, the Examiner rejected claims 1-13 and 15-55. Claims 1-13 and 15-55 remain pending in the present application and are believed to be in condition for allowance. In view of the following remarks, the Applicants respectfully request reconsideration and allowance of all pending claims.

Claim Rejections under 35 U.S.C. § 102

In the Final Office Action, the Examiner rejected claims 31-34, 36 and 42-43 under 35 U.S.C. § 102(b) as anticipated by Mochizuki et al. (U.S. Patent No. 4,875,633, hereinafter "Mochizuki"). Applicants respectfully traverse this rejection.

Legal Precedent

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under Section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Applicants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the *identical* invention "*in as complete detail as contained in the ... claim*" to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989). (Emphasis added.)

Claim Features Omitted from Cited Reference

Turning to the claims, independent claim 31 recites, *inter alia*, “wherein the machine readable code is adapted to control speed of a motor driving the second reeled media at least prior to splicing and adapted to control torque of the motor driving the second reeled media at least *subsequent to splicing*”; and independent claim 36 recites, *inter alia*, “a media drive disposed adjacent the second reel structure and adapted to drive the replacement media and to *apply a force opposing rotation of the replacement media for a transition from the unwinding media to the replacement media.*” (Emphasis added.)

In the Office Action, the Examiner specifically stated:

Claims 31-34, 36 and 42-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Mochizuki et al. The device (and resulting method) of Mochizuki et al relates to a splicing apparatus that includes sensor 43 for sensing the lead end of the material on the new roll, various other sensors for determining the diameter (and thus of the trailing end of the expiring web) of the expiring roll and the roll speeds including rotation sensors for the rolls, to control the acceleration of the new roll to web speed and to control the splice and cutting operations, and a programmed sequencer 70 for inputting data and outputting control operation information. Both rolls are driven and braked according to predetermined data.

With respect to amended claims 31 and 36, Mochizuki explains that both of the clutches may not be in a connection state or a disconnection [state] simultaneously, thus each roll has its own speed and the electromagnetic clutch is controlled so that torque may arise, see column 4, lines 50-65, and column 6, lines 22-45.

...

With respect to amended claims 31, 36 and 44, Applicant argues that Mochizuki fails to teach controlling the motor 21 to oppose the rotation of the succeeding paper roll 3a, since the drive belts 12 and 13 are driven at identical speeds, see column 4, line 66-column 5, line 2. Therefore,

the drive system of Mochizuki is incapable of opposing rotation of the succeeding paper roll 3a.

As explained above, Applicant is relying on a portion of the specification as recited in see [sic] column 4, line 66-column 5, line 2, Mochizuki explains the driving belts which are driven by the transmission of the rotary driving force of the driving motor 21 have the same circular motion speed. However, Mochizuki reference as a whole explains that both of the clutches may not be in a connection state or a disconnection simultaneously, thus each roll has its own speed and the belts are not driven at identical speeds at the beginning, see column 4, lines 50-65, and column 6, lines 22-45. (Emphasis in original).

Final Office Action mailed on September 12, 2005, Pages 2 and 4.

The Examiner's rejection is flawed for a number of reasons. The cited reference does not teach or suggest machine readable code adapted "to control torque of the motor driving the second reeled media at least *subsequent to splicing*," as recited by independent claim 31, or a media drive that is adapted "to apply a force opposing rotation of the replacement media *for a transition from the unwinding media to the replacement media*," as recited by independent claim 36. (Emphasis added.) In sharp contrast, Mochizuki teaches a paper splicing device 1 that absolutely fails to control torque of the motor 21 driving the succeeding paper roll 3a or apply a force opposing its rotation during or subsequent to splicing. For context, Mochizuki teaches a pair of drive belts 12 and 13 that drive a preceding paper roll 3b and a succeeding paper roll 3a. Mochizuki, Fig. 1. While the drive belts 12 and 13 may rotate at different speeds during loading of the succeeding paper roll 3a, Mochizuki, col. 6, ll. 51-54, the drive belt 12 clearly accelerates to the same speed as drive belt 13 before splicing. See Mochizuki, col. 7, ll. 32-44 (teaching that the succeeding paper roll 3a is rotated at the same peripheral speed as the preceding paper roll 3b). In other words, drive belts 12 and 13 rotate at the same speed during and after splicing. Indeed, the Examiner stated in the rejection that "the drive belts are not driven at identical speeds at the beginning." Final Office Action mailed on September 12, 2005, page 4. (Emphasis

changed.) In view of these identical speeds during and after splicing, the drive system of Mochizuki is absolutely incapable of opposing rotation of the succeeding paper roll 3a during the splicing transition. *See id.* Similarly, the drive system of Mochizuki is absolutely incapable of controlling torque of the motor 21 driving the succeeding paper roll 3a subsequent to splicing. Based on these missing features, Applicants respectfully request that the Examiner withdraw the rejection of claims 31 and 36 and the claims depending therefrom.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 1-13, 15-30, 35, 37-41 and 44-55 under 35 U.S.C. 103(a) as obvious over Mochizuki in view of Suzuki et al. (U.S. Patent No. 6,073,876, hereinafter "Suzuki").

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). The Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to

combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). Moreover, a statement that the proposed modification would have been “well within the ordinary skill of the art” based on individual knowledge of the claimed elements cannot be relied upon to establish a *prima facie* case of obviousness without some *objective reason to combine* the teachings of the references. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993); *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d. 1313, 1318 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d. 1161 (Fed. Cir. 1999).

During patent examination, the pending claims must be given an interpretation that is reasonable and consistent with the specification. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *see also* M.P.E.P. §§ 608.01(o) and 2111. Indeed, the specification is “the primary basis for construing the claims.” *See Phillips v. AWH Corp.*, No. 03-1269, -1286, at 13-16 (Fed. Cir. July 12, 2005) (citations omitted) (en banc). Interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *See In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); M.P.E.P. § 2111. “The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation.” *See Collegenet, Inc. v. ApplyYourself, Inc.*, No. 04-1202, -1222, 1251, at 8-9 (Fed. Cir. August 2, 2005) (quoting *Phillips*).

Claim Features Omitted from Cited References

In the Office Action, the Examiner stated:

Claims 1-13, 15-30, 35, 37-41 and 44-55 [are] rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al in view of Suzuki et al. While the Mochizuki et al reference does not include any tension control specifics[,] it is old and well known in the art to provide tension control to a running web, especially after a

splicing operation, and specifically it would have been obvious to control tension in the device of Mochizuki et al. in view of the teaching Suzuki et al. Suzuki et al directly relates to tension control of a web during and after a splice operation and includes all of the claimed features set forth in the application relating to tension control, specifically that the new roll is driven to coincide with the rotational speed of the expiring web and after splicing is braked in a tension controlled manner, see column 9, paragraph beginning on line 53.

With respect to amended claims 1, 15 and 21, Suzuki explains each roll 3,4,5 is driven by any conventional roll driver which controls the speed of the roll and has the automatic tension control 18z.

Final Office Action mailed on September 12, 2005, Pages 3 and 4.

Independent Claims 1 and 44

Independent claim 1 recites, *inter alia*, “controlling the *motorized drive* to adjust tension of the second reeled media,” and independent claim 44 recites, *inter alia*, “providing a transition drive controller adapted to control *a media transition drive* to accelerate the replacement media to a surface speed of the unwinding media and to generate a torque that opposes unwinding of the replacement media upon or after being spliced with the unwinding media.” (Emphasis added.)

Here again, the Examiner’s rejection is flawed for a number of reasons. The cited references do not teach or suggest, alone or in hypothetical combination, “controlling the *motorized drive* to adjust tension of the second reeled media,” as recited by claim 1, or “providing a transition drive controller adapted to control *a media transition drive*,” as recited by claim 44. (Emphasis added). As explained above, in reference to the Section 102 rejection, Mochizuki does not teach controlling tension during or after splicing, let alone controlling tension with a drive. In fact, the Examiner admitted that “the Mochizuki et al. reference does not include any tension control specifics.” Final Office

Action mailed on September 12, 2005, Page 3. Moreover, Suzuki does not obviate this deficiency. Suzuki unmistakably teaches controlling tension in a running paper web 9 with pneumatic brakes 6, 7 and 8. See Suzuki col. 3, ll. 1-6; col. 5, ll. 4-6; and col. 7, ll. 18-25. Clearly, brakes 6, 7, and 8 simply are not drives, as recited in the present claims. In view of these deficiencies, the cited references, taken alone or in hypothetical combination, cannot render obvious the current independent claims 1 or 44 or their dependent claims.

Claims 37-41

Claims 37-41 depend from independent claim 36, which recites, *inter alia*, “a *media drive* disposed adjacent the second reel structure and adapted to drive the replacement media and to apply a force opposing rotation of the replacement media for a transition from the unwinding media to the replacement media.” (Emphasis added.)

In contrast, as discussed above, neither Suzuki or Mochizuki, taken alone or in combination, teach or suggest “a *media drive* ... adapted to drive the replacement media and to apply a force opposing rotation of the replacement media,” as recited by claim 36. (Emphasis added.) In fact, Suzuki teaches brakes 6, 7 and 8 that adjust tension in a running paper web 9. *Supra*. Furthermore, as is also explained above, Mochizuki does not teach or suggest opposing the rotation of the replacement media with a *drive*. Accordingly, the cited references, taken alone or in hypothetical combination, fail to teach or suggest *all* the features of independent claim 36. Therefore, the cited references cannot render obvious dependent claims 37-41. Moreover, the cited references, taken alone or in hypothetical combination, fail to teach or suggest the additional feature recited in each of the respective dependent claims 37-41.

Independent Claims 15 and 21

Independent claim 15 recites, *inter alia*, “means for transitioning from *speed based control* to tension based control of the second reeled media to facilitate transitioning and

splicing between the first and second reeled media,” and independent claim 21 recites, *inter alia*, “a transition drive controller adapted to transition a motorized media drive from *speed control* to tension control of the second reeled media.” (Emphasis added.)

With regard to 35 U.S.C. §112, paragraph 6, the Federal Circuit has held “that the ‘broadest reasonable interpretation’ that an examiner may give means-plus-function language is that statutorily mandated in paragraph six.” *See* M.P.E.P. § 2181 (quoting *In re Donaldson Co.*, 16 F.3d 1189, 29 U.S.P.Q.2d 1845 (Fed. Cir. 1994) (en banc)). “Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination.” *See id.*

However, the cited references do not teach or suggest, alone or in hypothetical combination, “means for transitioning from *speed based control* to tension based control,” as recited by claim 15, or “a transition drive controller adapted to transition a motorized media drive from *speed control* to tension control of the second reeled media,” as recited by claim 44. As stated above, in the legal precedent section, the specification is “the primary basis for construing the claims.” *See Phillips v. AWH Corp.*, No. 03-1269, -1286, at 13-16 (Fed. Cir. July 12, 2005) (citations omitted) (en banc). Moreover, as stated in the preceding paragraph, with means-plus-function claims, “the PTO may not disregard the structure disclosed in the specification.” *See* M.P.E.P. § 2181. (Emphasis added.) Here, the term “speed based control” is clearly used to mean adjusting speed in response to a deviation from a target speed, and the term “tension based control” is clearly used to mean adjusting tension in response to a deviation from a target tension. Specification, page 6 (disclosing tension based control by adjusting tension to match a target tension); and page 8 (disclosing speed based control by accelerating a reeled media to match a target speed.)

The Mochizuki reference fails to teach or suggest such a transition to tension based control. Again, the Examiner stated that “the Mochizuki et al reference does not include

any tension control specifics.” Final Office Action mailed on September 12, 2005, page 3. Moreover, Suzuki exclusively teaches a tension control device. Suzuki, Abstract; and col. 2, ll. 33-35. The device taught by Suzuki adjusts the brake pressure of brakes 6, 7 and 8 in response to deviations from a targeted tension in the paper web 9, i.e., it controls tension. *Id.* at col. 5, ll. 6-7; col. 7, ll. 18-25; and col. 7, ll. 45-64 (teaching that brake pressure changes in response to tension.) While the speed of paper web 9 may change as a result of tension based control, *Id.* at col. 5, ll. 4-5, this does not mean that Suzuki teaches speed based control. Brake pressure is adjusted in response to a tension differential (i.e., difference between the actual tension and a target tension), not in response to a speed differential. *Id.* at col. 7, ll. 45-60. Indeed, Suzuki does not even disclose a speed sensor with which a speed differential might be determined. In short, the device taught by Suzuki is a tension control device and not a speed control device. *Id.* at Abstract. In view of the fact that Suzuki does not teach speed based control, Suzuki could not possibly teach or suggest *transitioning from speed based control* to tension based control. Thus, neither Mochizuki nor Suzuki, taken alone or in hypothetical combination, teach or suggest *all* the features of independent claims 15 or 21 or their dependent claims.

Claim 35

Claim 35 depends from independent claim 31, which recites, *inter alia*, “wherein the machine readable code is adapted to *control speed* of a motor driving the second reeled media at *least prior to splicing* and adapted to *control torque* of the motor driving the second reeled media *at least subsequent to splicing*.” (Emphasis added.)

As discussed above, neither Suzuki or Mochizuki, taken alone or in combination, teach or suggest a machine readable code that is “adapted to *control speed* of a motor driving the second reeled media *at least prior to splicing* and adapted to *control torque* of the motor driving the second reeled media *at least subsequent to splicing*,” as recited by claim 31. (Emphasis added.) The Mochizuki reference fails to teach or suggest such a transition to tension based control. Again, the Examiner stated that “the Mochizuki et al

reference does not include any tension control specifics.” Final Office Action mailed on September 12, 2005, page 3. While Suzuki may teach tension based control, this reference clearly does not teach or suggest speed based control of the second reeled media. *Supra*. Thus, Suzuki certainly does not teach a transition from speed based control to tension based control. Accordingly, the cited references, taken alone or in hypothetical combination, fail to teach or suggest *all* the features of independent claim 31. Therefore, the cited references cannot render obvious dependent claim 35.

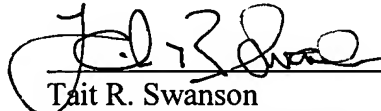
For these reasons, among others, Applicants respectfully requests withdrawal of the rejections under 35 U.S.C. § 103.

Conclusion

The Applicants respectfully submit that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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